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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/475,093 12/30/99 HALFANT

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EXAMINER

TM02/0309

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HUYNH, C
ART UNIT

PAPER NUMBER

2176

DATE MAILED:

03/09/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/475,093

Applicant(s)

HALFANT, MATTHEW D.

Examiner

Cong-Lac Huynh

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

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DETAILED ACTION

Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 13 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 13, the steps of the claim are not disclosed in the specification.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lam (US Pat No. 5,960,464, 9/28/99, filed 8/23/96) in view of Callway (US Pat No. 6,075,574, 6/13/00, filed 5/22/98).

Regarding independent claim 1, Lam discloses:

- reading first digital information from a DVD player (col 4, lines 18-30)
- decompressing the first digital information to create a second digital information (col 4, lines 31-41)
- display the digital information (col 4, lines 31-41)

Lam does not explicitly disclose storing the second digital information, which is decompressed from the first digital information. However, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have recognized that such storing should be included for displaying image files as well as for editing the digital information later.

In addition, Lam does not disclose manipulating the second digital information, which is decompressed, in order to produce the third digital information different from the second digital information and display the third digital information.

Callway discloses controlling contrast of DVD images to fix the image distortion so that DVD images are displayed without blooming and brightness degradation (col 1, lines 10-56; col 2, lines 13-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Callway into Lam to enhance the quality of DVD images

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displayed by adjusting the contrast of images read by the DVD player, which means manipulating the digital information to display to users.

Regarding claims 2 and 3, which is dependent on claim 1, Lam discloses processing a first frame in order to produce a second frame different from the first frame (col 6, lines 54-62; col 2, lines 1-12)

Regarding claim 4, which is dependent on claim 1, Lam further discloses:

- parsing the first digital information which includes an MPEG video stream (col 6, lines 1-16, 38-45)
- decoding the MPEG video stream to create the second digital information which includes a plurality of video frames (col 6, lines 38-62)

Regarding independent claim 6, Lam discloses:

- a DVD player which produces a plurality of digital frames (col 4, lines 18-41; col 2, lines 1-10)
- a buffet which stores at least one digital frame (col 1, lines 25-39; col 2, lines 52-63)
- a video display which displays the plurality of processed frames (col 4, lines 18-30; col 2, lines 1-10)

Lam does not disclose a media processing subsystem which manipulates the plurality of digital frames to produce a plurality of processed frames.

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Callway, as mentioned in claim 1, discloses a system that manipulates digital images to produce adjusted digital images, which are processed frames as claimed (col 2, lines 13-30; col 3, lines 1-22).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have combined Callway into Lam to enhance the quality of DVD images displayed by adjusting the contrast of images read by the DVD player.

Regarding claims 5, 7-8, 19-20, which are dependent on claims 1, 6, and 13 respectively, as in claims 1 and 6, Callway discloses enhancing contrast as well as warping images (col 1, lines 10-60; col 2, lines 13-30; col 3, lines 1-22; col 4, lines 4-23).

Regarding claims 9 and 15, which are dependent on claims 6 and 14 respectively, Lam discloses that the processed framed are displayed at a rate of at least twenty-four frames per second (col 2, lines 1-10, MPEG 2 standard decodes 720 pixels per line and 576 lines per frame for a single image and approximately *30 frames per second*).

Regarding claims 10-12, which are dependent on claims 6 and 11 respectively, Lam discloses that:

- the DVD system comprises means for converting the processed frame into a format compatible with a video display (col 4, lines 18-40; col 1, lines 50-57, 62-67)

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- the media processing subsystem comprising a plurality of media processor (col 4, lines 42-67; col 5, lines 1-44)
- media processor comprises a central processing unit and a processing buffer (col 5, lines 27-44)

Independent claim 13 is for a method of claims 1 and 6, and is rejected under the same rationale.

Regarding claim 14, which is dependent on claim 13, Lam discloses:

- reading a new frame from the compressed data stream (col 4, lines 18-41)
- a graphics or video *accelerated card for rapidly displaying* static images (col 2, lines 1-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have included in Lam discarding a frame from the first plurality of frames, organizing the new frame and first plurality of frames edited to form the third plurality of frames, and obtaining the second motion information between the third plurality of frames.

The former is merely editing the first plurality of frames by dropping one of the frames in the sequence. Since Lam provides the graphics or video accelerated card to display images, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have applied said card to the third plurality of frames for a different motion of displaying a frame from that created third frames.

Claim 16 includes the same subject matter as in claim 4, and is rejected under the same rationale.

Regarding claims 17 and 18, Lam discloses that decompressing comprises executing a software decompression algorithm on a media processing system (col 4, lines 30-67; col 5, lines 1-27) and multiple samples for a pixel using information from the first plurality of frames (col 1, lines 25-40; col 2, lines 1-17).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

McDade et al. (US Pat No. 5,889,515, 3/30/99, filed 12/9/96) teaches rendering an audio-visual stream synchronized by a software clock in a personal computer.

Chau (US Pat No. 5,870,087, 2/9/99, filed 11/13/96) teaches a MPEG decoder system and method having a unified memory for transport decode and system controller functions.

Heron (US Pat No. 6,055,478, 4/25/00, filed 10/30/97) teaches integrated vehicle navigation, communication and entertainment system.

Dinallo et al. (US Pat No. 5,929,857, 7/27/99, filed 9/10/97) teaches a method and apparatus for dynamically constructing a graphic user interface from a DVD data stream.

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Chen et al., Extraction of High-Resolution Video Still from MPEG Image Sequences, IEEE, 1/98, pages 465-469.


Liu, MPEG Decoder Architecture for Embedded Applications, IEEE, 8/14/96, pages 1021-1028.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cong-Lac Huynh whose telephone number is 703-305-0432. The examiner can normally be reached on Mon-Fri (8:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5403 for regular communications and 707-308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9000.

clh
March 5, 2001


HEATHER R. HERNDON
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